

University of Groningen

'Papiere bolwercken'. De introductie van de Italiaanse stede- en vestingbouw in de Nederlanden (1540-1609) en het gebruik van tekeningen.

Heuvel, Cornelis Marinus Johannes Maria van den

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version

Publisher's PDF, also known as Version of record

Publication date:

1991

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Heuvel, C. M. J. M. V. D. (1991). 'Papiere bolwercken'. De introductie van de Italiaanse stede- en vestingbouw in de Nederlanden (1540-1609) en het gebruik van tekeningen. s.n.

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

Summary

PAPER BULWARKS

The introduction of Italian town planning and fortification in the Low Countries (1540-1609) and the function of drawings
summary*

In 1540 emperor Charles V, assisted by a team of military experts, decided to provide Antwerp, the most important city of the Netherlands at that time, with a new wall designed by an Italian engineer, Donato Boni. From that moment until 1609, the year of the beginning of the Twelve Year's Truce, more than sixty Italian engineers worked in the Low Countries (nowadays the Netherlands, Belgium and parts of France and of Germany). These Italian engineers not only modernized the medieval walls with a new defence system based on flanking by means of bastions, but also built new settlements and citadels. Even when their military buildings were replaced by new Dutch fortifications, the defence principle of attacking the enemy in the flank from protruding bastions remained unchanged.

The way this fundamental change of the defensive works, which conditioned the further development of the Dutch city far into the nineteenth century, had been introduced from Italy, has hardly got any attention in the history of architecture.

In Italy, at the end of the fifteenth, and the beginning of the sixteenth centuries, artists played an important role in the development of the new fortification system and the military buildings were praised alongside their paintings, sculptures and palaces. The involvement of Renaissance artists in military architecture has led to many art-historical speculations in which their activities in the field of fortifications were considered as artistic achievements and their buildings as works of art. When fortification in the thirties of the sixteenth century became a matter for specialists, the military architecture disappeared gradually from writings on the arts and the lives of artists.

Before World War II, the military architecture of the Renaissance again gained attention. It were architects and town planners rather than art-historians who showed this interest. The architects of the 'Modern Movement' recognized in the military buildings the embodiment of a Renaissance ideal: the combination of utility and

beauty and tried herewith to form a historical base for the aesthetics of their functionalistic architecture. Also the town planners used the military architecture of the Renaissance to legitimate their interventions. They presented military settlements and citadels which showed formal similarities to regular urban forms as historical examples for their linear or centralizing town plans.

After World War II also architectural historians paid more attention to the military architecture of the Renaissance. Their interest was broader and directed in another way; they recognized aesthetic and symbolic values in the military buildings of the Renaissance and considered them as the embodiment of humanistic ideals. The first chapter is a historiographic survey of studies in which the activities from artists in the field of fortification has been described as an artistic process and their military buildings as creations of art. With the help of Michelangelo's fortification drawings, it will be shown that the attention for the military works of the Renaissance artist in literature had been basically directed to its significance for his further artistic achievements, not to its function as a war machine. In a second historiographic theme, will be illustrated how military buildings have been described continuously in other terms as a piece of art, a symbol or an ideal city.

With typically art-historical methods of iconology and art theory, which first had been tried out on civil and especially sacred buildings, the military architecture of the Renaissance became analysed. Architectural historians searched for statements about beauty and symbolism, very rare in treatises on fortifications, in writings on architecture of the fifteenth and sixteenth centuries. The autonomous character of the theory of military architecture was neglected and the statements about beauty and symbolism were quoted out of context and often read from a twentieth-century, functionalistic point of view.

The military buildings were not only regarded as art or symbol but also as realizations of ideal cities. We will focus on the Italian fortress-town Palmanova to show how military settlements for their regular form were described as ideal cities and philosophical, political, social and aesthetical meanings were added to explain them as the embodiment of humanistic ideals.

These international art-historical interpretations of

military buildings as a piece of art, symbol or ideal city affected also the literature of the Dutch city. Fortifications and extensions of Dutch towns in the sixteenth- and seventeenth centuries were confronted with Italian treatises on architecture which contained descriptions of 'ideal' cities.

In this study the meaning of the Italian town planning and fortification for the Dutch city will be described in a different way. Not the Italian theories on the 'ideal' city but rather the introduction of Italian town planning and military architecture as practice forms our point of departure. The practice of town planning and military architecture will be pictured by describing the activities of the Italian engineers in the Netherlands and on the other hand by analyzing the process of planning and execution of urbanistic and military projects by means of drawings which were used in different phases of decision-taking and technical realization.

The Italian engineers form a very heterogeneous group. The second chapter deals with the diversity of the sixty Italian engineers in the Netherlands. Some of them struggled against cold and illness during the construction of fortifications, others were well-dressed courtiers for whom the problems of military architects formed a nice theoretical subject for a table conversation or for the compilation of an expensive work in print. Some of these engineers, frequently noblemen, had a cultural education and showed great interest in the arts. They were portrayed by local artists and ordered their paintings. From these contacts with the courts and artists we may assume that the Italian engineers played a role in the introduction of the Italian Renaissance in the Low Countries.

The arrival of the numerous Italian engineers led to severe tensions on the local building market. While the local master builders were restricted by several regulations of the guilds, the Italian engineers obtained without difficulty the most important projects of town planning and defensive works. Their privileged position becomes clear from their testimonies in a case at Antwerp in 1542. It will be shown how the Italian engineers, became associated with the term 'architect' based on theories of the Italian Renaissance, which had just been introduced in the Netherlands and how they became a model for local master builders who pleaded for more freedom within the regulations of the guilds.

Apart from the activities of the Italian engineers, the impact of the Italian town planning and fortification is demonstrated by the enormous amount of representations of cities and fortifications they

made and sent to their commissioners in Italy and Spain. In the third chapter categories have been developed for the hundreds of drawings in important collections at Turin, the Vatican City, Naples, Madrid, Simancas and some other archives and libraries.

Many of these drawings are here published for the first time and sometimes they are the earliest known representations of certain towns in the Netherlands. The categorization is based on their function.

With the help of existing cartographic categories it is possible to describe certain representations with a decorative or informative function. For an analysis of the drawings which were used for town planning and fortification, however, they often are not detailed enough. With the help of written documents that throw light on the use of drawings in the different phases of planning and execution of urban and defensive projects these categories are refined to make them adaptable for architectural-historical research.

The following two chapters deal with the use of drawings in the planning and execution of the regular fortress-towns Mariembourg, Hesdinfort and Philippeville and of the citadels of Antwerp, Groningen and Flushing. The more or less regular form of these settlements has been explained in architectural studies as the result of the use of models from treatises on military architecture. Here it will be stated that these treatises can hardly have played a significant role in the creation of the fortress towns. Apart from the fact that most treatises only existed in manuscript, the planning-history of these settlements turned out to be a lengthy process. With the help of drawings it will be demonstrated how the design changed continuously to correspond to the demands of the location and the contradicting military and civil interests before it found its definite form.

Also the design of the citadels in the Netherlands is linked in literature with the use of models. Some authors recognized in the citadels a growing autonomy of the design towards the location, while in this study an opposite development will be described. In the fifth chapter will be shown how at Antwerp an existing 'model', the one of the citadel of Turin, was adapted to the chosen location while in the planning of the later citadels in the Netherlands, those of Groningen and Flushing, the basic form was directed to the circumstances of the situation right from the beginning.

Drawings illustrate the planning history of Antwerp step by step. It will be demonstrated how Margeret of Parma prepared the planning, the

choice of a location for the citadel and commissioned designs. These designs, made by a Dutch engineer Jacques van Noyen and the Italian Francesco De Marchi were ignored by the Duke of Alva who brought Francesco Pacciotto with him in order to make a new design. Moreover Alva sent a new commission to choose a proper site for the citadel. The report of this commission, under guidance of Chiappino Vitelli and Gabrio Serbelloni, with all arguments in favour and against the different locations and their impact on the city of Antwerp is published here for the first time. After the definite choice of the location (more or less on the spot indicated by Francesco de Marchi), Pacciotto's design, based on the citadel of Turin, had to be adapted to the walls of Antwerp. Several drawings, found in the archives of the Duke of Alva, made by the Italian engineer Tomaso Corbetta, illustrate the difficulties of the insertion of Pacciotto's plan in the existing situation of Antwerp. Contemporaries criticized Pacciotto's plan. This criticism would lead to fundamental changes of the citadel by Bartolomeo Campi, Pacciotto's successor. It was this engineer and not Pacciotto, as generally accepted in literature, who made the definitive designs for the citadel of Groningen and Flushing. The differences between the citadel of Antwerp on the one side and those of Groningen and Flushing on the other will be related to the discussion about universal models and location-directed planning. The notion that not all solutions in Italian theory were adaptable in practice would influence the fortification methods in their own country and be underlined in writings on military architecture.

While most cities in the Low Countries in the last quarter of the sixteenth century were provided with modern walls which corresponded to the Italian fortification system, the theoretical knowledge in that field hardly existed yet. Most treatises still had to be published and the Italian fortification was known mostly through word of mouth, manuscripts and drawings.

Although the knowledge of the Italian theory of military architecture did not penetrate in the Dutch language before the publication of *De Sterckenbouwing* (Fortification) of the scientist Simon Stevin, the subject was brought up indirectly in partial translations of treatises on architecture of Antiquity and the Italian Renaissance by Pieter Coecke van Aelst and Hans Vredeman de Vries. In the beginning their remarks were limited to the ornament, but in the end also concerned the military architecture itself.

While the reception of Italian theories on ornament progressed rather smoothly, ideas on the large

scale, complex structures of fortifications were received very hesistantly. Chapter six concerns the difficult introduction and reception of Italian town planning and fortification in Dutch theories on that subject. The notion that not all Italian ideas were adaptable would lead to a new Dutch theory on fortification

The first advocate of a non-Italian theory on military architecture was the German military architect Daniel Specklin. Despite his severe criticism on Italian engineers he nevertheless adopted their solutions. Also Simon Stevin followed in his *De Sterckenbouwing* (Fortification) mainly the Italian fortification system. His aim was to explain the existing knowledge in the field of military architecture in a logical and clear way rather than to introduce a new fortification system. For this purpose he underlines the use of drawings and models to visualize this knowledge. From the moment Stevin got more involved in the practice of fortification and warfare, he focused in his writings on military subjects more and more on the Dutch situation. Simon Stevin became quartermaster in the State Army and gave advices on fortification and hydraulic works in several Dutch cities. Stevin's attention to practical problems not only influenced his later writings on warfare and fortification but also on architecture and town planning. Simon Stevin's treatise on town planning *Vande oirdeningh der steden* (Town planning), published posthumously by his son Hendrick, was an independent discourse, which once belonged to an unpublished text on architecture: *Huysbou* (Housebuilding). *Vande oirdeningh der steden*, often has been represented in literature as a Dutch variant of the Italian 'città ideale'. Here will be demonstrated that Stevin's work on town planning differs fundamentally in content and in method from the Italian architectural treatises of the Renaissance which deal with the (ideal) city. While the authors of the Italian Renaissance gave their churches, squares and cities a central groundplan which could be inscribed in a circle or square, Stevin organized his buildings, the city, and even the space outside its perimeter, according to the principle of symmetry. Different from Vitruvius and his followers, who described symmetry as a harmony in the proportions of different parts of a human figure, Stevin explained it as an agreement between the left side and right side of a body. The hypothesis is put forward that the emphasis Stevin lays on symmetry as an organizing principle can be related possibly with the ideas of Petrus Ramus. This French mathematician in his 'natural method' made frequently use of dichotomies i.e. a symmetrical order of definitions and sub-definitions to analyze and

visualize a certain case or problem. The way Stevin underlines the natural character of symmetry, his references in other texts to the method of Ramus, and finally the sequel of the French scholar at the University of Leiden at the beginning of the seventeenth century form an indication to support this hypothesis.

The visual and empirical aspects of the didactic method of Petrus Ramus, also characterized the education programme Stevin developed in 1600, on behalf of Prince Maurice, for a training school for surveyors and engineers. All lessons, mainly directed on the practice of landsurveying and fortification, of this school were taught in the Dutch language which therefore was called the 'Neder-

Duytsche Matematique'.

The introduction of the Italian knowledge drew to a close. Italian theories on military architecture were rendered out of date by developments in the practice of the defence of cities in the Netherlands before they could penetrate completely. Also the diffusion in practice by Italian engineers came to an end. Dutch landsurveyors and engineers built towns and fortifications in the Netherlands but also in other European countries and introduced new ideas on town planning and military architecture, as once Italian engineers did.

* gecorrigeerd door Janet Armstrong